

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.





32
Ag 82
Ref 13

235994

AIC-181
March, 1948

CANDY: ITS INGREDIENTS AND MANUFACTURE

A List of References

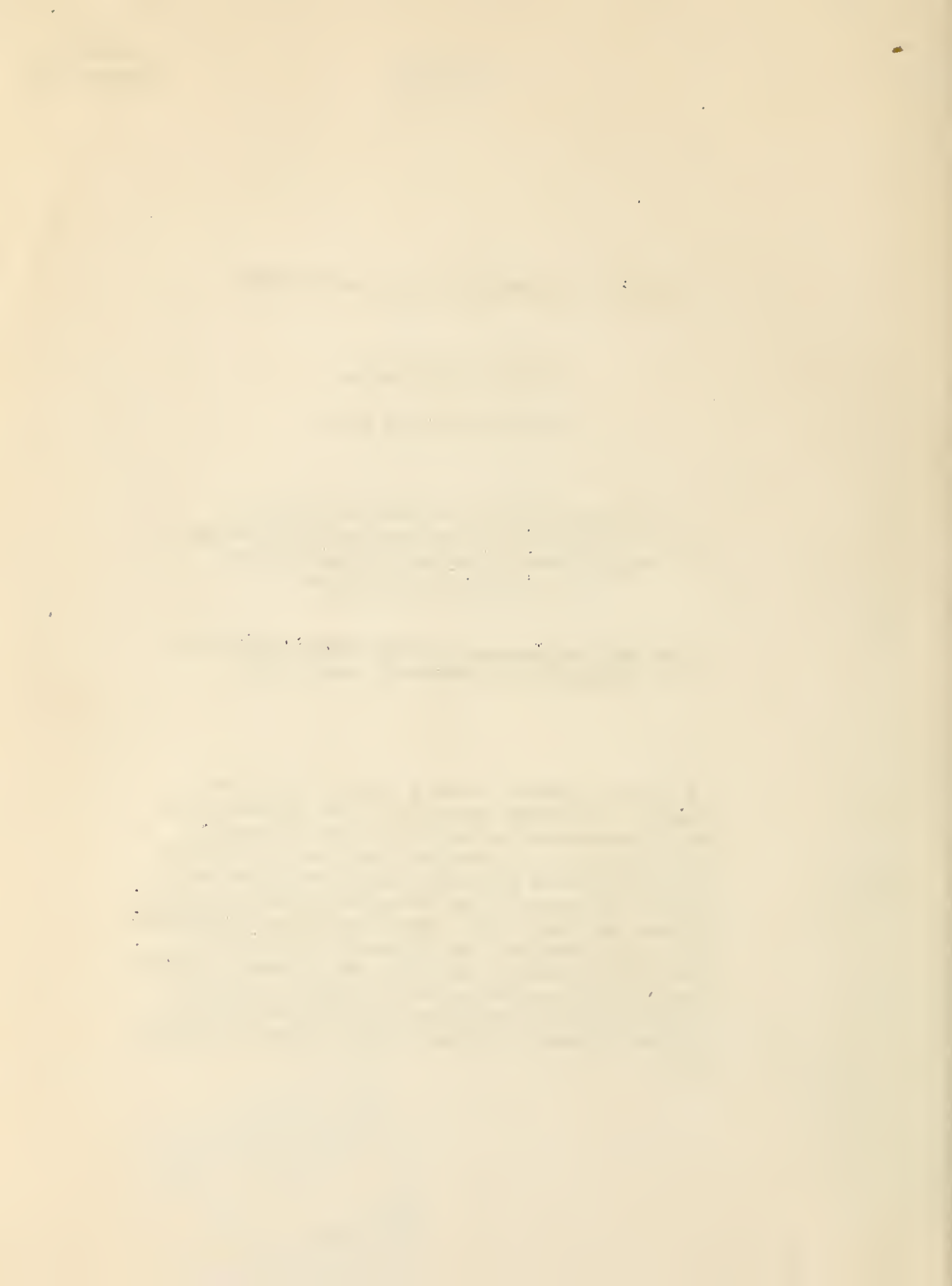
Compiled by H. H. Hall

Agricultural Chemical Research Division
Bureau of Agricultural and Industrial Chemistry
United States Department of Agriculture
New Orleans 19, Louisiana

Under the Cooperative Research Project with the
National Confectioners' Association

This bibliography covers a large part of the technical literature relative to the chemistry and use of ingredients in the manufacture of candy. References are also given to literature pertaining to various phases of candy manufacture, such as, physical and chemical measurements, process controls, storage, spoilage, etc. These literature references, with brief abstracts, are intended to serve as a guide to the several subjects. The journal, Chemical Abstracts, has served as the principal source of references and in such cases the abstract reference is given together with that of the original publication.





1. ANDRESEN, V. V. J. Sugar product and method of making same. U. S. Pat. 1,732,492. Oct. 22, 1929.
Chem. Abs. 24:261. 1930.
A method for preparing a sugar product containing calcium from Ca saccharate, CaCO_3 or CaSO_4 for use in foods and confections.
2. ANON. Making maple cream. Mimeo. Circular, U. S. Dept. Agr. Rev. 1927.
Describes method.
3. ANON. Home-made maple candies. Mimeo. Circular, U. S. Dept. Agr. 1929.
Describes method.
4. ANON. Directions for making crystallized maple cordial candies. Mimeo. Circular, U. S. Dept. Agr. 1934.
Describes method.
5. ANON. Acacia lacta gum from Nigeria. Bull. Imp. Inst. 38:297-9. 1940.
Chem. Abs. 35:1259. 1941.
Forms weak gel. Would be suitable for use chiefly by the confectionery trade.
6. APPELL, C. H. Twentieth century candy teacher. (Book) Lutz and Stahl, Keokuk, Ia. 1912.
7. AXELROD, A. Confectionery. German Pat. 538,626. Feb. 13, 1927.
Chem. Abs. 26:2254. 1932.
A preparation to be added to confectionery is made by treating sterile skim milk with peptonizing bacteria, such as B. acidophilus, etc., and removing and drying the precipitate. Sodium phosphate may be added.
8. BACK, E. A. and COTTON, R. T. Confectionery plant fumigation against insects. Manuf. Conf. 23:No. 2. 37-8. 1943.
Chem. Abs. 37:2481. 1943.
A number of fumigants are listed.
9. BAKANOV, N. A. Utilization of cereal by-products for the production of glucose and maltose sirups. Pishkekovaya Prom. 1943. No. 1/2. 41-2.
Chem. Abs. 40:141. 1946.
Method described for production of sirup from cereal and confectionery products.
10. BAKER, G. R., EPPS, J. W., and PERKS, G. W. Coating confectionery or like products. U. S. Pat. 1,737,447. Nov. 26, 1929.
Chem. Abs. 24:668. 1930.
Method for depositing chocolate.
11. BELCHER, L. Process for making confections. U. S. Pat. 1,614,057, Jan. 11, 1927.
Chem. Abs. 21:782. 1927.
After cooking a mixture of raisins, sugar, corn sirup and honey, bran is added and the mixture further cooked, fondant added, cooled and shaped.

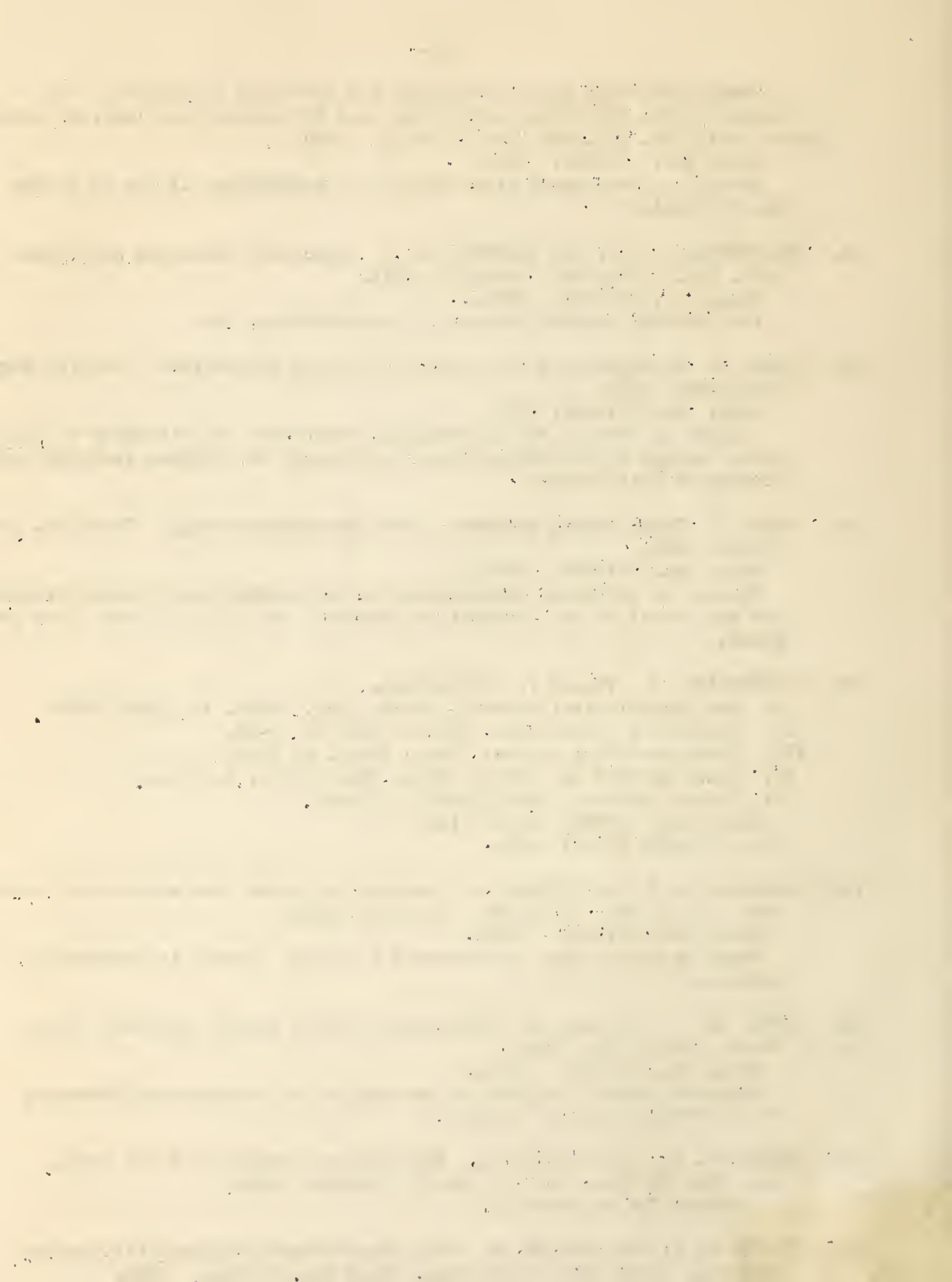
12. BELL, W. A. Wm. Bell's pilot: An authoritative book on the manufacture of candies. The Workman Mfg. Co., Chicago.
13. BERMAN, M. The how and why of candy making (Book) Emmet Boyles, Chicago.
14. BENNION, E. B. Emulsification in the confectionery and baking industries. Food Manuf. 4:247-9. 1929.
Chem. Abs. 23:5247. 1929.
A discussion of some colloidal problems.
15. BRADLEY, A. The candy cook book. Little, Brown & Co., Boston. 1917.
16. BRITSCHGI, W. Confectionery cream. Swiss Pat. 143,006. Feb. 20, 1930.
Chem. Abs. 25:2782. 1931.
A stable confectionery cream consists of a hot concentrated solution of sugar, grape sugar, eggs and vegetable fat.
17. BROWNE, C. A. Recent progress in industrial utilization of honey. Am. Bee Jr. 77:563-5. 1937.
Chem. Abs. 32:670. 1938.
A discussion of its composition in relation to its common uses, particularly in the confectionery and baking industries.
18. BUCHANAN, B. F. Dispersion of gums. U. S. Pat. 2,376,656, May 22, 1945.
Chem. Abs. 39:3375. 1945.
Dispersion of pure gums is facilitated by the presence of soluble salts of lactic acid.
19. BUTLER, H. G. Soybean produces a whipping agent. Manuf. Conf. 22:No. 4. 12-14. 1942.
Soybean protein derivative may be used to replace egg albumin. Is equal or superior to egg albumin with respect to whippability and "weeping" tests, but is inferior to egg albumin in coagulation tests.
20. BYWATER, H. W. Modern methods of cocoa and chocolate manufacture. (Book) The Blakiston Co., Philadelphia.
21. CALIFORNIA FRUIT GROWERS ASSOC. Jelly preparations. British Pat. 396,749. Aug. 8, 1933.
Chem. Abs. 28:542. 1934.
Preparation of a slow-setting jelly.
22. CARRECK, M. S. Some studies in fondant making. Jr. Phys. Chem. 23:589-602. 1919.
Chem. Abs. 14:580. 1920.
A set of proportion of ingredients, mixing, etc., leads to directions whereby standard product can always be obtained.
23. CHENOWETH, W. W. How to make candy. (Book) The MacMillan Co., New York.
24. CHILDS, W. H. Modern methods of candy-scrap recovery. Manuf. Conf. 23:No. 2. 13-15. 1943.
Chem. Abs. 37:2481. 1943.

Scrap hard candy can be reused by (1) reworking immediately into another batch, (2) making into sirup, and (3) making into inverted sirup. Also: Ibid. No. 3. 19-20; No. 4. 17-18. 1943.

Chem. abs. 37:3847. 1943.

Starch in scrap candy gives trouble in reclaiming; it may be broken down by diastase.

25. CHRISTENSEN, H. K., and BENNETT, L. J. Temperature-treating apparatus. U. S. Pat. 1,798,725. March 31, 1931.
Chem. abs. 25:3097. 1931.
For freezing liquids for use in confectionery, etc.
26. CLARK, T. Refrigeration an essential in candy manufacture. Refrig. Eng. 20:219-22. 1930.
Chem. Abs. 25:2492. 1931.
Outline of methods for controlling temperature and viscosity of chocolate; storage to prevent graying; and control to regulate graining and storage of 6-12 months.
27. CLARK, T. Candy making requires a wide temperature range. Food Ind. 4: 171-3. 1932.
Chem. abs. 26:5673. 1932.
The use of different temperatures in the manufacture of candy products and the effect on the physical and chemical properties of the candy are given.
28. CLENDENNING, T. Flavor in confections.
 - I. The physiological aspect. Manuf. Conf. 20:No. 1, 17-19, 1940.
 - II. Methods of evaluation. Ibid. 20:No. 2. 23-25.
 - III. Taste-provoking agents. Ibid. 20:No. 3. 21-2.
 - IV. Learning what the public likes. Ibid. 20:No. 4. 22-4.
 - V. Vanilla flavor. Ibid. 20:No. 5. 30-1.Chem. abs. 34:2948 (I-III) 1940
Ibid. 34:4826 (IV-V) 1940.
29. COLLINGS, E. J. and MORALES, A. Recovery of sirup from waste sugar products. U. S. Pat. 1,530,594. March 24, 1925.
Chem. abs. 19:1606. 1925.
Scrap or stale candy is converted to sirup. Starch is converted to maltose.
30. CLYNE, E. J. Coloring and flavoring of boiled sweets and rock. Food Manuf. 5:104, 122. 1930.
Chem. Abs. 24:2810. 1930.
Practical advice is given on the subject of coloring and flavoring boiled sweets and rock candies.
31. CRUESS, W. V., and O'NEILL, A. The home preparation of fruit candy. Agr. Ext. Service. Univ. of Calif. Berkley. 1927.
Methods for preparation.
32. CULVER, W. C. and GARNATZ, G. Food manufacturers responsibility before operating under air conditioning. Food Ind. 8:276-8. 1936.



Chem. Abs. 30:6067. 1936.

Moisture and temperature control of air in food plants may make necessary the revision of formulas, especially candy, marshmallows and chocolates.

33. DALY, R. E., FRANKENFIELD F. A., and SCHOPMEYER, H. H. Method of making modified corn starch. U. S. Pat. 2,373,016. April 3, 1945.
Chem. Abs. 39:3956. 1945.
Method for modifying cornstarch which gives clear, non-stringy, short gels resembling those of root starches. Useful for food purposes as puddings, pie fillings and gum drops.
34. DAMBLON, H. New Method for the manufacture of chocolate, cocoa powder and confectionery. Buch-und Kunsthandlung J. Hof^Uer in Korn, Cologne.
Chem. Abs. 34:2950. 1940.
35. DANIELS, A. L., and COOK, D. M. Factors influencing the amount of invert sugar in fondant. Univ. Wisc. Jr. Home Econ. 11:65-9. 1919.
Chem. Abs. 13:1349. 1919.
Amount of invert sugar determined by varying amounts of water and acid in fondant batches. Character of water also influences inversion.
36. DAVIS, W. L. Dairy products in confectionery and chocolate manufacture. Confectionery Production. 1:127-8. 1935.
Chem. Abs. 29:5194. 1935.
Brief review and discussion of the composition and physical properties of milk products from the standpoint of their utilization in confectionery and chocolate manufacture.
37. EICHBERG, J. Lecithin - its manufacture and use in the fat and oil industry. Oil and Soap. 16:51-4. 1939.
Chem. Abs. 33:3617. 1939.
Discusses its source, recovery and use.
38. ELLIS, D., and CAMPBELL, D. The science and practice of confectionery. (Book) Longmans, Green and Co., Ltd. London. 1928.
39. FARLEY, Jr., J. K. Candy and process of making the same. U. S. Pat. 1,601,302. Sept. 28, 1926.
Chem. Abs. 20:3755. 1926.
Uses ammonium carbonate to puff up batch of plastic candy.
40. FINCKE, H. Reducing (the amount of) fat used in producing cocoa products in confectionery. Fette u. Seifen. 46:57-64. 1939.
As a rule only minor decreases are possible without loss of quality.
41. FINCKE, H. Cocoa products and sweet goods, and information on their behavior on heating. Z. Untersuch. Lebensm. 77:357-74. 1939.
Chem. Abs. 33:4691. 1939.
Information on behavior with respect to moisture loss during drying.
42. FOLTS, A. V., and BASINA, S. A. Confections made from high acid fruits and berries with the addition of sodium bicarbonate. Konservnaya Plodovoshchnaya Prom. 1938, No. 3, 1921.

Faint, illegible text at the top of the page, possibly a header or introductory paragraph.

Second block of faint, illegible text, appearing as several lines of a paragraph.

Third block of faint, illegible text, continuing the document's content.

Fourth block of faint, illegible text, showing further lines of the document.

Fifth block of faint, illegible text, possibly a section break or a new paragraph.

Sixth block of faint, illegible text, continuing the main body of the document.

Seventh block of faint, illegible text, showing more lines of the document.

Eighth block of faint, illegible text, possibly a concluding paragraph or a list item.

Ninth block of faint, illegible text, continuing the document's content.

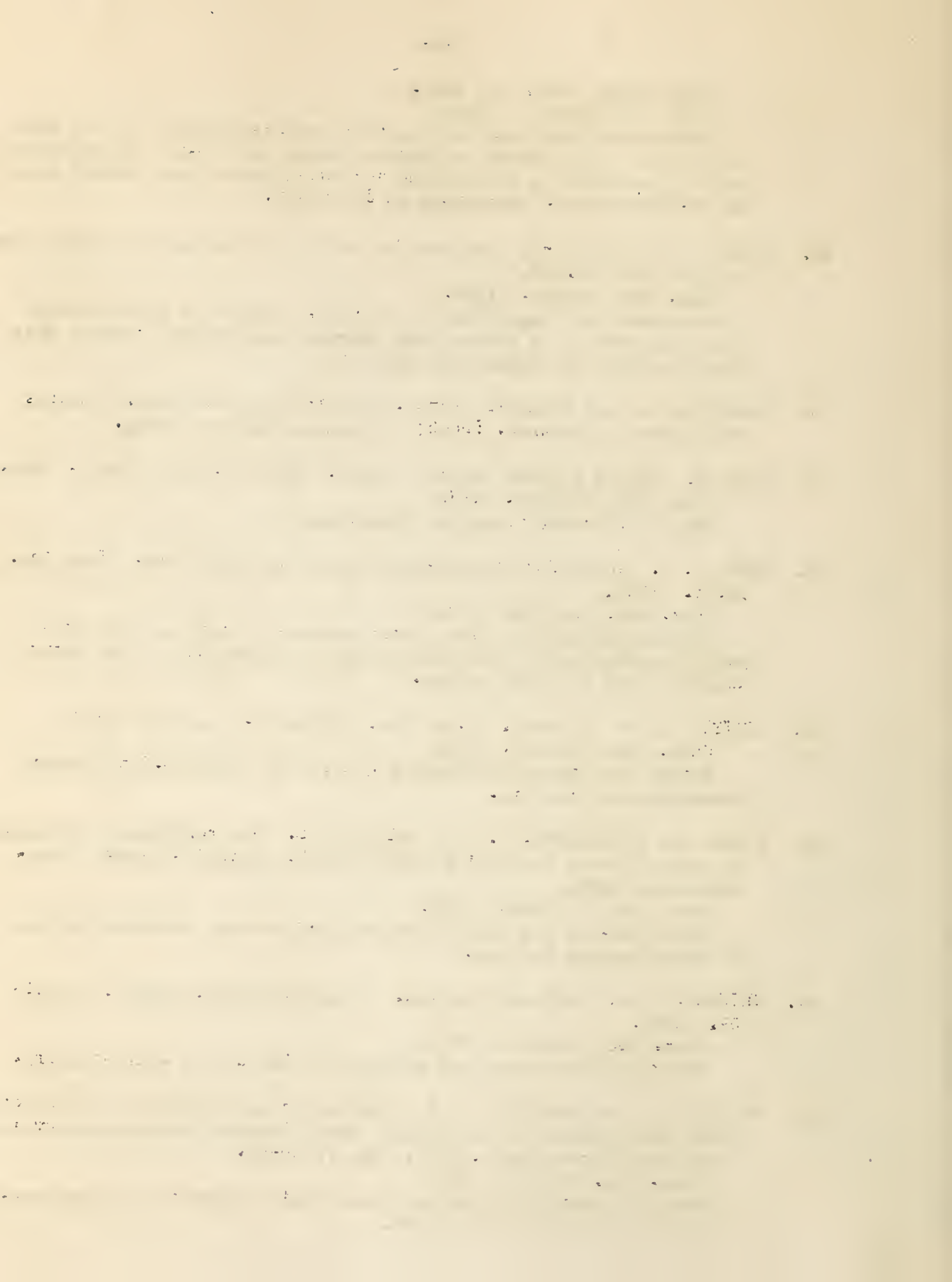
Tenth block of faint, illegible text at the bottom of the page, possibly a footer or signature.

Chem. zentr. 1938, II, 3026.

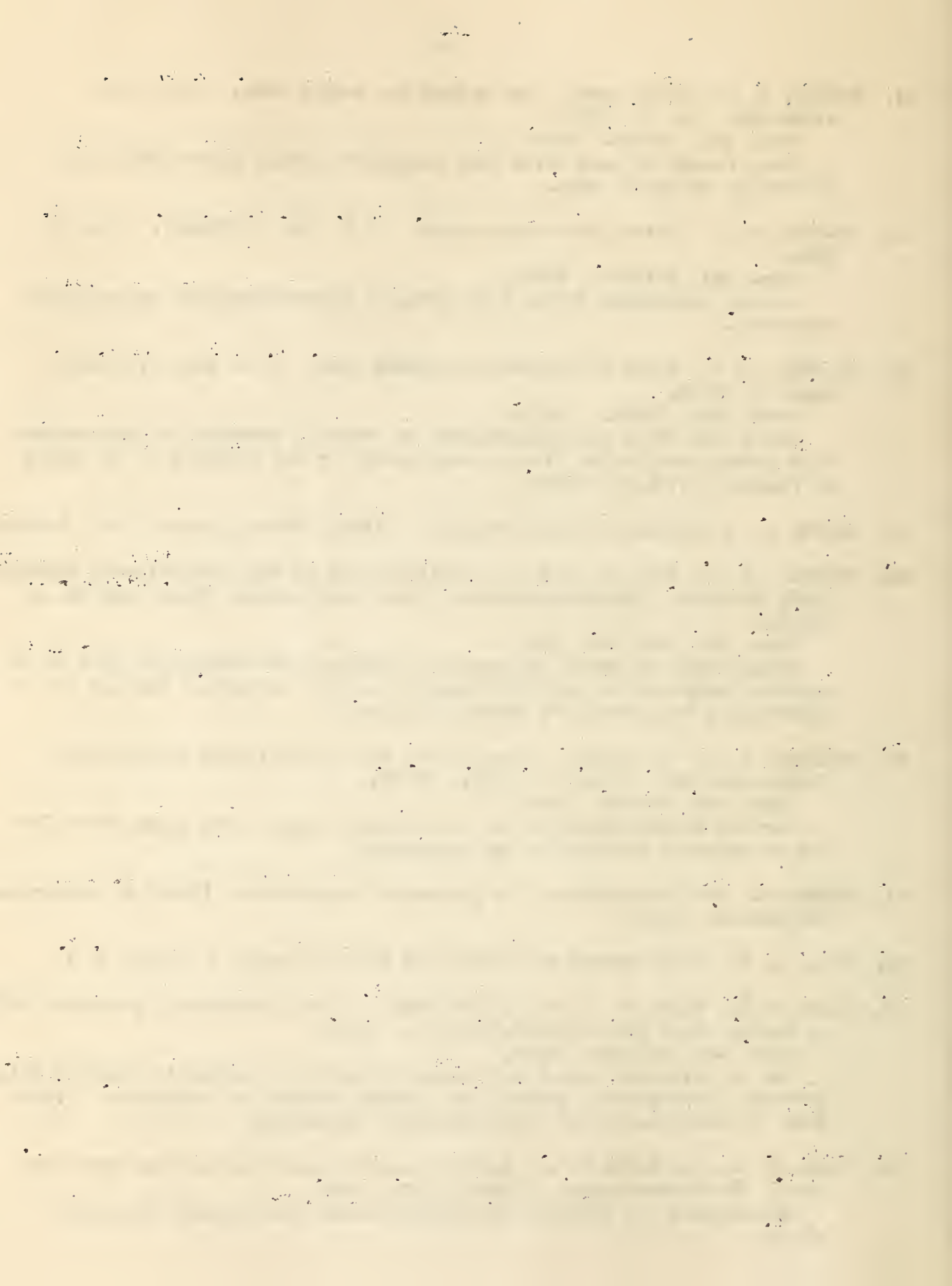
Chem. Abs. 34:5956. 1940.

Confections from high acid content products must be boiled with pure sugar. Bicarbonate is added to bring pH to 4.0. Crystallization is prevented by maintaining sucrose-glucose ratio 48-59% invert and 33-40% sucrose; calculated on dry basis.

43. FRAME, A. W. Saccharine product for use in confectionery, baking, etc. British Pat. 311,916.
Chem. Abs. 24:901. 1930.
A mixture of a sugar such as sucrose, lactose or glucose with water and maltose is heated with stirring and rapidly cooled; this retards growth of crystals in the mass.
44. FRANCOIS, L. Les aliments sucros, industriels, chocolats, bonbons, confiseries confitures. (Book). Gauthier-Villars, Paris.
45. FUAD, N. Liquid refined sugars. Manuf. Conf. 19:No. 4. 19-21. 1939.
Chem. Abs. 33:5692. 1939.
Its use in candy making is described.
46. GEER, L. P. Ideal for postwar-fruit juice in candy form. Food Ind. 16:73. 1944.
Chem. Abs. 39:1233. 1945.
Various fruit juice with pectin removed or degraded and acid partly neutralized is evaporated down to 2% moisture. The natural ascorbic acid is quite stable.
47. GERTTIE, D. P. Gelatin. U. S. Pat. 2,196,300. April 9, 1940.
Chem. Abs. 34:5196. 1940.
Method for improving whipping quality by adding 0.5-5% sodium hexametaphosphate, etc.
48. GIDRA, A., GRITZAENKO, A., and KATZENKO, L. The replacement of sugar in confectionery by first run-off. Nauk. Zapiski Tzukrovnoi Prom. 26:105-6. 1932.
Chem. Abs. 27:4120. 1933.
First run-off may be decolorized with carbon, sulfocarbonation or other process for use.
49. GLIKMAN, S. A. Colloidal pectin. J. Applied Chem. (USSR). 4:1041-59. 1931.
Chem. Abs. 26:3424. 1932.
Describes properties and reasons for its use in confectionery.
50. GOLANT, B., and PASKHINA, V. I. Oxidized cacao butter as a means of controlling chocolate fat bloom. Trudy Tsentral Nauch-Issledovatel. Inst. Konditerskoi Prom. 1939. No. 1. 56-62.
Chem. Abs. 35:3720. 1941.
Small quantities of oxidized cacao butter improved keeping qualities and does not affect flavor.



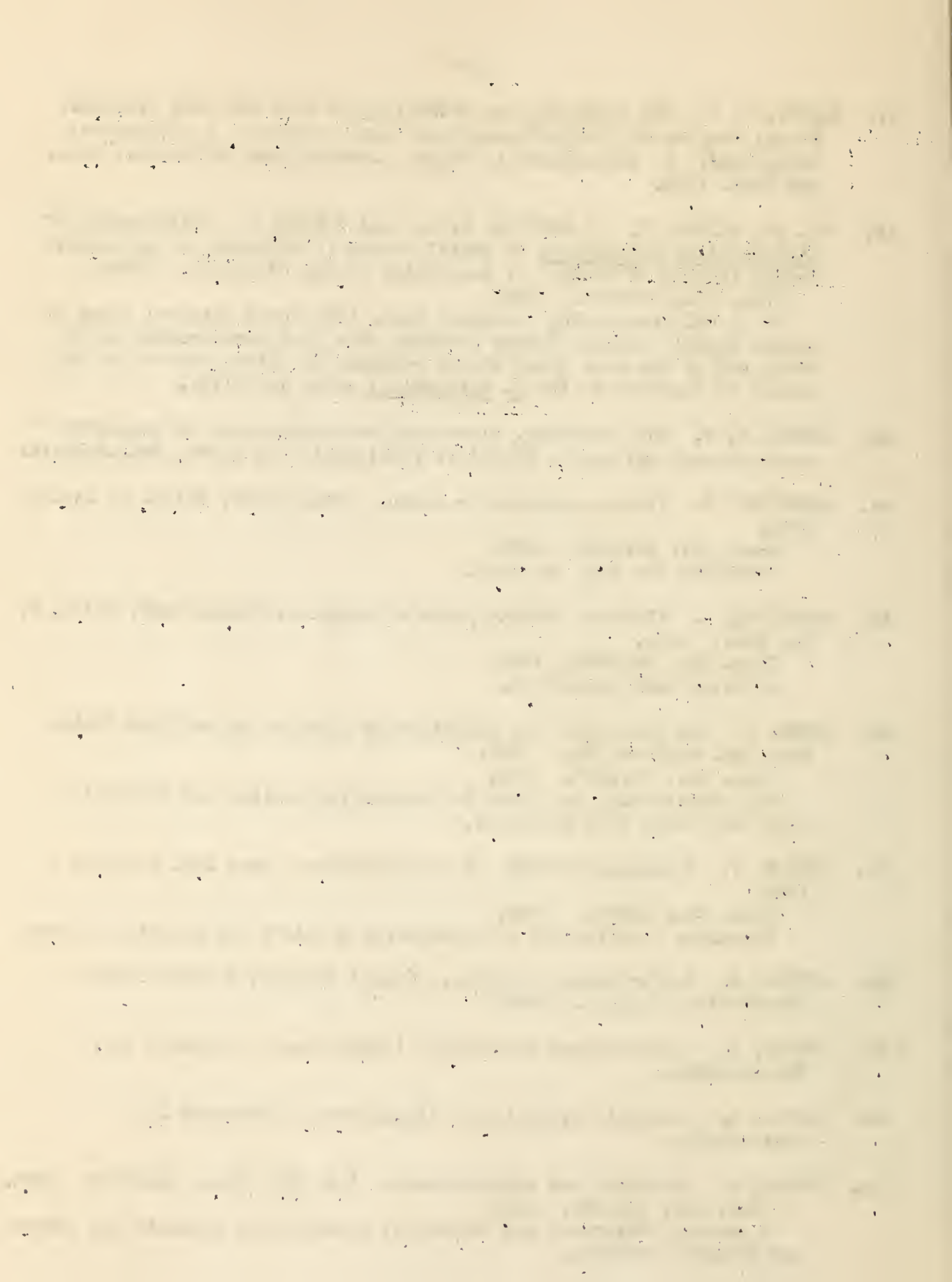
51. GORDON, G. S. Candy product and method for making same. U. S. Pat. 1,063,533. June 3, 1913.
Chem. Abs. 7:2446. 1913.
Candy formed of corn sirup 35%, sugar 15%, peanut butter 50%, and flavoring, or ground nuts.
52. GRANGER, H. G. Method for making candy. U. S. Pat. 1,765,867. June 24, 1930.
Chem. Abs. 24:4107. 1930.
A candy containing Ca and P as CaPO_4 , Ca glycerophosphate and calcium carbonate.
53. GRANGER, H. G. Candy and method for making same. U. S. Pat. 1,927,640. Sept. 19, 1933.
Chem. Abs. 27:5841. 1933.
about 1-3% of Ca glycerophosphate or other Ca compound is incorporated with candy, cake or the like to compensate for the tendency of the sugar to remove Ca from the blood.
54. GRANT, J. Confectioners' Raw Materials. (Book) Edward Arnold & Co., London.
55. GRYUNER, V. C. Russian agar as a jelling agent in the confectionery industry. Trudy Tsentral. Nauch-Issledovatel Inst. Konditerskoi Prom. 1939 No. 1, 153-63.
Chem. Abs. 35:3728. 1941.
Odessa agar and white sea agar are compared with commercial agar as to chemical composition, gelation capacity and gel strength. Because of differences they should be termed agaroids.
56. GRYUNER, V. S. Treatment of sugar beets for confectionery production. Fishchevaya Prom. 1943. No. 1/2. 35-40.
Chem. Abs. 40:482. 1946.
Various modifications in the extraction of sugar from sugar beets for use in specific confections are discussed.
57. GRIMM, G. Die bonbonkocherei im gross-und kleinbetrieb. (Book) H. Kinninger, Nordhausen. 1923.
58. HALL, M. E. Candy making revolutionized (Book) Sturgis & Walton, N. Y.
59. HALL, H. H., FAHS, F. J., and CHARBONNET, L. New agricultural products used in candy. Food Ind. 18:1008-10, 1172. 1946.
Chem. Abs. 40:7443. 1946.
Use of oil-seed, cereal and legume products in candies to increase fat, protein, carbohydrate, mineral and vitamin content are discussed. Problems of incorporation of ingredients are discussed.
60. HALL, H. H., and FAHS, F. J. Modified pectins make possible new type candies. The Confectioner. 31:10-11, 37. 1946.
Description and formulas for candies using low-methoxyl pectin are given.



61. HALL, H. H., and FAHS, F. J. Isolated proteins in candy making. The Manuf. Conf. 26:No. 11. 27-28, 77. 1946.
Describes properties and gives formulas for its use in nougat, hard candy, and creams.
62. HALL, H. H., and Fahs, F. J. Improved fruit marshmallow. The Manuf. Conf. 27:No. 10. 32 and 35. 1947.
Concentrated fruit puree is used to produce marshmallow of outstanding quality. Basic formula using 20% fruit puree is given.
63. HALL, H. H., and FAHS, F. J. Dressings for candy slabs. The Manuf. Conf. 27:No. 9. 40-41. 1947.
Methods and preliminary results of study of use of several vegetable oils as replacement for mineral oils are given.
64. HALL, H. H., and FAHS, F. J. Isolated proteins in hard candies. The Manuf. Conf. 27:No. 11. 32 and 35. 1947.
Isolated soybean protein products containing from 83.0 to 94.17% protein were incorporated in hard candies. Formulas for candies are given.
65. HALLA, F., and MEHL, E. Surface changes in candies due to recrystallization. List. Zuckrovar. 50:144-6. 1931.
Chem. Abs. 26:1990. 1932.
Study of crystal changes using Rontongen tube with a Cu-K target and camera at an effective radius of 28.76 mm.
66. HALLA, F., and MEHL, E. The surface change of sugar goods during recrystallization. Mitt. staatl. tech. Versuchsanst. (Wein). 19:78-80. 1930.
Chem. Abs. 25:4633. 1931.
Sugar candies drawn from the kettle and allowed to stand in dry air show no tendency to recrystallize, but if allowed to stand in moist air they recrystallize.
67. HARRIS, B. R. Confection. U. S. Pat. 2,027,167. Jan. 7, 1936.
Chem. Abs. 30:1457. 1936.
Method for making coatings comprised of fat or chocolate.
68. HARRIS, B. R. Confection and method of producing same. U. S. Pat. 2,024,356. Dec. 17, 1935.
Chem. Abs. 30:1144. 1936.
Coating or icing made by dispersing sugar, cocoa powder and milk powder in cocoa butter.
69. HARRIS, B. R. Confection. U. S. Pat. 2,025,985. Dec. 31, 1935.
Chem. Abs. 30:1144. 1936.
Method for reducing viscosity of sugar, cocoa powder and fat mixture using non-nitrogenous phosphoric acid ester of glycerol.

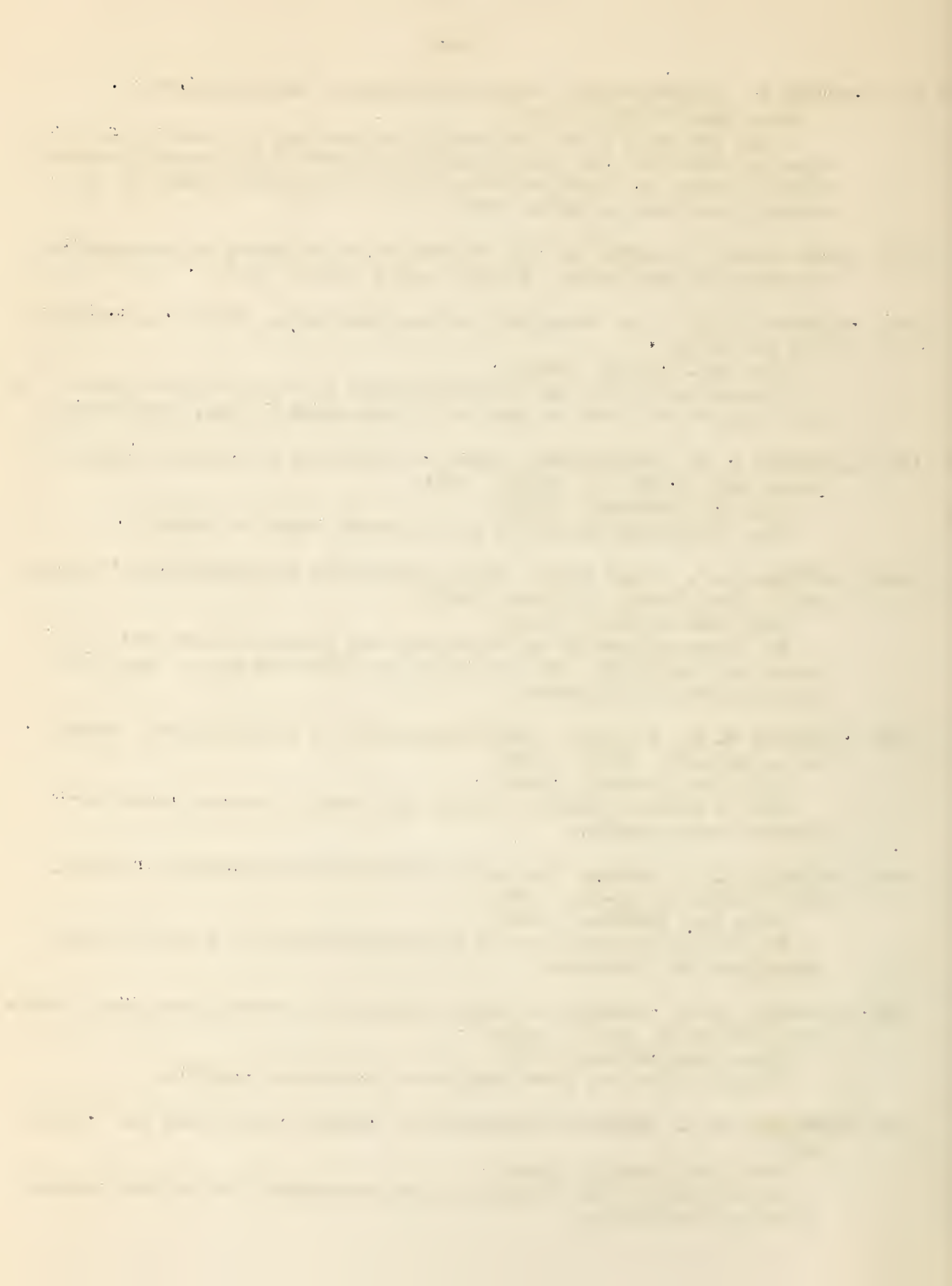
70. HAUG, W. H. Crystallizing may have two meanings. Food Ind. 9:72-3, 106. 1937.
Chem. Abs. 31:6745. 1937.
Saturated solutions of sucrose at 140° F. contained approximately 74% sucrose, and on cooling considerable supersaturation occurs before crystallization begins. At each dipping of candies to be crystallized there is a loss of about 3% in sugar content. Less than 2% of the sugar should be inverted in crystallization sirups. Control of crystal size is discussed.
71. HAUSNER, A. The manufacture of preserved foods and sweetmeats. (Book) Scett, Greenwood & Co. London.
72. HECKMANN, A. Bonbons, desserts und pralinen. (Book) H. Killinger, Nordhausen, 1922.
73. HECKMANN, A. Butterkrem-und fondant-verzierungen. (Book). H. Killinger, Nordhausen.
74. HECKMANN, A. Grosses konditorreiebuch. (Book) H. Killinger, Nordhausen, 1927.
75. HECKMANN, A. Karamel-arbeiten. (Book) H. Killinger, Leipzig, 1921.
76. HENDERSON, P. S. Candy crystallizing machines. U. S. Pat. 1,650,513. Nov. 22, 1927.
Chem. Abs. 22:468. 1928.
A crystallizing apparatus comprised of a number of superposed sirup pans and mechanical means for raising and lowering containers.
77. HILBERT, G. E., MacMASTERS, M. M., COX, M. J., BICE, C. W., HEDGES, M., and GETZ, V. L. Starch sponge - a promising new ingredient. Food Ind. 17-878-82. 1945.
Chem. Abs. 39:4704. 1945.
Describes process for making dry sponge which is light, porous, crisp, quite strong and flavorless. Does not become stale, however, it is hygroscopic. Several uses in confections are suggested.
78. HOLLINGHAM, P. Chocolate creams: A manual for retail confectioners. (Book) The Baker and Confectioner, Ltd. London, 1925.
79. HUDSON, C. S. Glazing composition (for candy). U. S. Pat. 1,646,731. Oct. 25, 1927.
Chem. Abs. 22:286. 1928.
A spirit-soluble gum such as shellac is dissolved in about 2-2.3 times its weight of isopropyl alcohol.
80. INTERNATIONAL PATENT DEVELOPMENT CO. Dextrose. Fr. Pat. 824,599. Feb. 11, 1938.
Chem. Abs. 32:5954. 1938.
Dextrose hydrate is heated to 71-94° C. to obtain a soft non-gravelly powder suitable for making confectionery.

81. JACOBS, M. B. The chemistry and technology of food and food products. (Book) Chapter XXI Confectionery and cacao products. 1. Historical background. 2. Ingredients in candy. Interscience Publishers, Inc., New York, 1944.
82. JAY, P., HADLEY, F. P., BUNTING, R. W., and KOEHNE, M. Relationship of Lactobacillus acidophilus to dental caries in children during experimental feeding of candy. J. Am. Dental Assoc. 23:846-51. 1936.
Chem. Abs. 30:5624. 1936.
Of 51 children during 12 months diet, 13% showed clinical signs of active dental caries. During 5 months on a diet unrestricted as to candy 44% of the same group showed evidence of active caries and 80% showed an increase in the L. acidophilus count in saliva.
83. JENSEN, H. R. The chemistry, flavouring and manufacture of chocolate confectionery and cocoa. (Book) P. Blakiston's Son & Co., Philadelphia.
84. JOHNSTONE, C. Flavor emulsions in candy. Manuf. Conf. 19:No. 4. 14-16. 1939.
Chem. Abs. 33:5083. 1939.
Describes how they are made.
85. JOHNSTONE, C. Flavors: twenty years of progress. Manuf. Conf. 21:No. 5, 38, 68-9. 1941.
Chem. Abs. 35:4864. 1941.
A review with references.
86. JONES, W. How industrial air conditioning operates in the food field. Food Ind. 8:272-4, 300. 1936.
Chem. Abs. 30:6067. 1936.
Air conditioning as an aid to controlling quality and safety in candy and other food factories.
87. JORDAN, S. Packaging problems of confectionery. Food Ind. 1:13-16. 1928.
Chem. Abs. 23:451. 1929.
Discusses relationship of atmospheric moisture and chocolate bloom.
88. JORDAN, S. Confectionery problems. (Book) National Confectioners' Association, Chicago. 1930.
89. JORDAN, S. Confectionery standards. (Book) Geo. S. Ferguson Co., Philadelphia.
90. JORDAN, S. Chocolate evaluation. (Book) Geo. S. Ferguson Co., Philadelphia.
91. JORDAN, S. Chemistry and confectionery. Ind. Eng. Chem. 16:336-9. 1924.
Chem. Abs. 18:1722. 1924.
A general outline of raw materials, manufactured products and attendant chemical problems.



92. JORDAN, S. Sugar, the master preserver. Food Ind. 1:207. 1929.
Chem. Abs. 23:1965. 1929.
Discusses solubility and crystallization of sugar and use of invertase in candy.
93. JORDAN, S. Food product and method for producing the same. U. S. Pat. 1,859,240, May 17, 1932.
Chem. Abs. 26:3857. 1932.
Various details are given in the manufacture of confections containing lecithin.
94. KELLER, O. "Marzipan" and "marzipan" substitutes.
Z. Untersuch. Lebensm. 54:78-83. 1927.
Chem. Abs. 22:1193. 1928.
A subject review.
95. KELLOGG, J. L. Process of making confections. U. S. Pat. 1,110,267.
Sept. 8, 1914.
Chem. Abs. 8:3605. 1914.
Method for making a confection from sugar or candy and shredded or flaked cereals from corn or wheat, etc.
96. KIRBY, W. Lozenges through the centuries. Chemist and Druggist 127;595-6.
1937.
Chem. Abs. 32:3092. 1938.
An illustrated historical account.
97. KISH, Z. J. Yeast composition for use in candy making. U. S. Pat. 1,898,057. Feb. 21, 1933.
Chem. Abs. 27:2739. 1933.
Describes a preparation containing live yeast which may be used in various candy mixtures.
98. KOMM, E., and LALMER, H. The strength of the acid taste of the organic acids used in the confectionery industry. Z. Untersuch. Lebensm. 79:433-54. 1940.
Chem. Abs. 34:5557. 1940.
The literature on the subject is reviewed. Data is given on the acid taste and pH of several organic acids. There was no proportional relationship between pH and acid taste.
99. KONONOV, A. Making whipped confections with blood plasma proteins. Trudy Vsesoyuzn. Nauch-Issledovatel. Inst. Konditerskoi Prom. 1941. No. 3, 289-99.
Chem. Abs. 37:6364. 1943.
Describes properties of product which may be used in the manufacture of candy.
100. KRNO, J. M., and SCHILDBERGER, A. Process of making grained confection. U. S. Pat. 1,939,990. Dec. 19, 1933.
Chem. Abs. 28:1423. 1934.
Preparation of grained fondant containing dextrose, dextrin and levulose.

101. KUNZLE, C. Confectionery. Brit. Pat. 365,402. March 14, 1931.
Chem. Abs. 27:2739. 1933.
A hard sweetmeat is made by heating and melting dry cane or beet sugar to about 300° F., adding honey or glucose to cool rapidly without crystallization and finally adding to the cooled mass albumin in an aerated mass, such as marshmallow.
102. LAER, H. VAN, and LAER, M. VAN. Principes scientifiques de boulangerie, patisserie et confiserie. (Book) Masson, Paris. 1943.
103. LAITIERES SOC., G. R. Dried milk and confectionery. Brit. Pat. 248,391. Feb. 27, 1925.
Chem. Abs. 21:782. 1927.
A molded bar is made by evaporating milk in vacuo to near dryness. It may be chocolate coated or used as an ingredient of other confections.
104. LANGWILL, K. E. Invert-sugar types. A comparison of available supplies. Manuf. Conf. 19:No. 3. 18-19. 1939.
Chem. Abs. 33:4449. 1939.
Gives sweetening values and use of invert sugars in candy.
105. LANGWILL, K. E. Sugar types. Their suitability to confectioners' needs. Manuf. Conf. 19:No. 4. 23-4. 1939.
Chem. Abs. 33:5691. 1939.
The commercial grades of crystalline and powdered sugars and sugar sirups are described. The advantages and disadvantages of the use of liquid sugars are discussed.
106. LANGWILL, K. E. Colloids. Their application in confectionery. Manuf. Conf. 19:No. 5. 37-8. 1939.
Chem. Abs. 33:5083. 1939.
Uses of pectin, gelatin, albumin, gum arabic, starch, casein and lecithin are described.
107. LANGWILL, K. E. Starch. Its use in confectionery manufacture. Manuf. Conf. 19:No. 8. 19-20. 1939.
Chem. Abs. 33:8846. 1939.
The roll of starch as an aid in the manufacture of candy and as an ingredient are discussed.
108. LANGWILL, K. E. Gelatin. An edible colloid for confectionery use. Manuf. Conf. 19:No. 9. 18-19. 1939.
Chem. Abs. 33:8846. 1939.
Discusses uses and gives analysis of commercial samples.
109. LANGWILL, K. E. Skimmed condensed milk. Manuf. Conf. 19:No. 12. 18-19. 1939.
Chem. Abs. 34:824. 1940.
A discussion of the analysis of some commercial samples with respect to candy manufacture.



110. LANGWILL, K. E. Caramel types. Increasing their nutritive value. *Manuf. Conf.* 21:No. 8. 15-16. 1941.
Chem. Abs. 35:6685. 1941.
The nutritive value of caramels containing skin milk, whole milk, cream and sweetened condensed whey was increased over those containing only carbohydrate.
111. LASBY, E. W. Food compound. U. S. Pat. 1,060,912. May 6, 1913.
Chem. Abs. 7:2076. 1913.
Confection paste formed of dried albumin, gum karaya, gum tragacanth, ground corn flakes and a nut paste.
112. LASCAS, A. How to make candies (Book). I. & M. Ottenheimer. Baltimore, Md.
113. LECOQ, R. Note sur la fabrication et l'analyse des chocolats. *Ann. fals.* 24:11-22, 96-104. 1931.
Chem. Abs. 25:2492. 1931.
Discussion of manufacture and analysis of pure chocolate and chocolate with additional products. Analytical data are given.
114. LEFFINGWELL, G., and LESSER, M. A. Modern candy production finds new uses for glycerol. *Manuf. Conf.* 18:No. 12. 18-20, 38. 1938.
Chem. Abs. 33:1406. 1939.
A review of its uses in confectionery with 28 references.
115. LEO, A. Food composition. U. S. Pat. 1,643,950. Oct. 4, 1927.
A food composition for use in making meringues, marshmallow, etc., is formed with albumin and pectin.
U. S. Pat. 1,643,951. Oct. 4, 1927.
Chem. Abs. 21:3992. 1927.
Specifies use of albumin, pectin, sodium bicarbonate, and citric acid in food mixtures like marshmallows and meringues.
116. LEROY, G. A. "Apple sugar" of Rouen. *Ann. fals.* 18:260-76. 1925.
Chem. Abs. 19:2713. 1925.
Sort of "toffee" originally prepared from sugar and apple juice.
117. LITTLE, A. D. Manufacture of gum confections. U. S. Pat. 2,173,878. Sept. 26, 1939.
Chem. Abs. 34:542. 1940.
Sugars are used with a chlorinated reaction product, formed from a starch and an alkaline hypochlorite to give confections longer shelf life, greater jelling character, and increased transparency.
118. LUND, A. A. Method of inducing crystallization. U. S. Pat. 2,041,197. May 10, 1936.
Chem. Abs. 30:4584. 1936.
Dextrose, sucrose and pectin are dispersed in an aqueous mixture cooked and creamed in the manufacture of fondant.

119. LUND, A. A. Method of preparing grained confections. U. S. Pat. 2,199,887. May 7, 1940.
Chem. Abs. 34:5958. 1940.
Prepared from solutions of dextrose and sucrose, the latter in sufficient quantity to supply an excess of sirup in the finished product.
120. MARSHALL, J. B., HOPKINS, J. W., and YOUNG, G. A. Effects of conditions of storage on the stability of ascorbic acid in various carriers. Canadian J. Res. 22F:39-47. 1944.
Chem. Abs. 38:4323. 1944.
Fortified chewing gum, hard candy, and other products with ascorbic acid added after processing were stored under controlled conditions. From 70-80% of ascorbic acid remained after one year, when dry and at a temperature not above 23.9° C. In moist air products deteriorated before losses were excessive.
121. MARTIN, Jr., J. W. Method of crystallization. U. S. Pat. 1,825,646. Sept. 29, 1931.
Chem. Abs. 26:221. 1932.
CO₂ gas is liberated in a suitable sugar solution to cause simultaneous agitation and freezing in the production of candy mixtures and cake icings.
122. McDONALD, J. H., and HOPSON, C. A. Sugared nut candy. U. S. Pat. 931,137. Aug. 17, 1909.
Chem. Abs. 3:2599. 1909.
A solution of sugar and glucose in water is heated to 104°, nut meats being then added and the temperature raised to 127° and held until nuts are cooked. A solution of salt is added, the mixture stirred, spread to cool and harden.
123. MELCHER, M. Process of manufacturing sugar candy. U. S. Pat. 190,613. Aug. 22, 1906.
Chem. Abs. 2:924. 1908.
Procedure for manufacturing candy in large crystalline (rock) form.
124. MOGAT, C. Confection. Brit. Pat. 308,552. Sept. 28, 1928.
Chem. Abs. 24:173. 1930.
Product giving sensation of cold made by mixing melted fat (coconut butter) and chocolate, then cooling by contact with ice. Sugar may be added. Details of manufacture are given.
125. MORGAN, R. H. Scientific control in the confectionery industry. Food Manuf. 1:127-8. 1927.
Chem. Abs. 22:2626. 1928.
A discussion of the application of scientific control in the manufacture of confections.
126. MORGAN, R. H. Graining of wrapped gums. Food Tech. 2:227, 1933.
Chem. Abs. 27:3259. 1933.
Believed due to water absorption.

1870

1871

1872

1873

1874

1875

1876

1877

1878

1879

1880

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

1897

1898

1899

1900

1901

1902

1903

1904

1905

1906

1907

1908

1909

1910

1911

1912

1913

1914

1915

1916

1917

1918

1919

1920

1921

1922

1923

1924

1925

1926

1927

1928

1929

1930

1931

1932

1933

1934

1935

1936

1937

1938

1939

1940

1941

1942

1943

1944

1945

1946

1947

1948

1949

1950

1951

1952

1953

1954

1955

1956

1957

1958

1959

1960

1961

1962

1963

1964

1965

1966

1967

1968

1969

1970

1971

1972

1973

1974

1975

1976

1977

1978

1979

1980

1981

1982

1983

1984

1985

1986

1987

1988

1989

1990

1991

1992

1993

1994

1995

1996

1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

2021

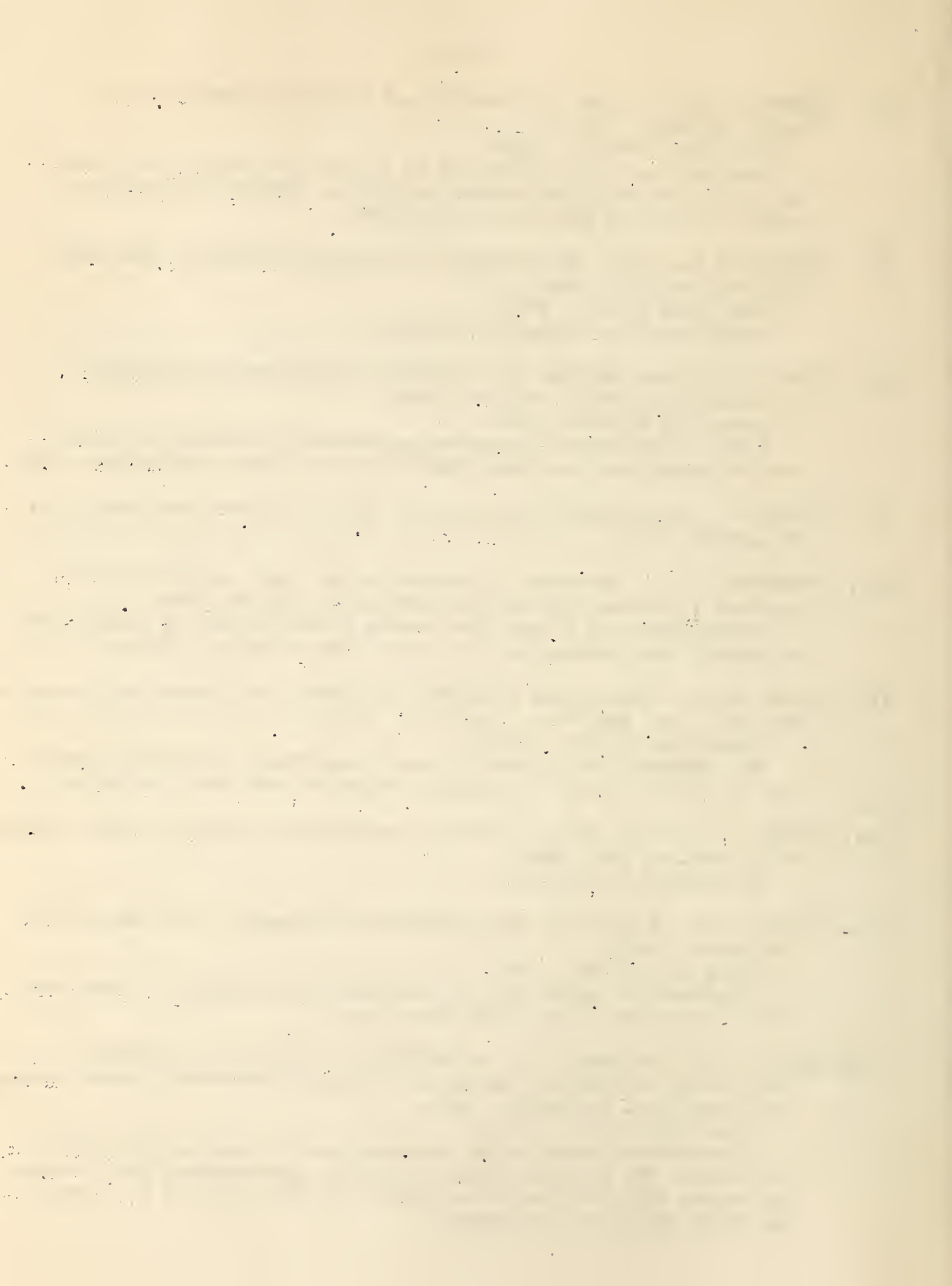
2022

2023

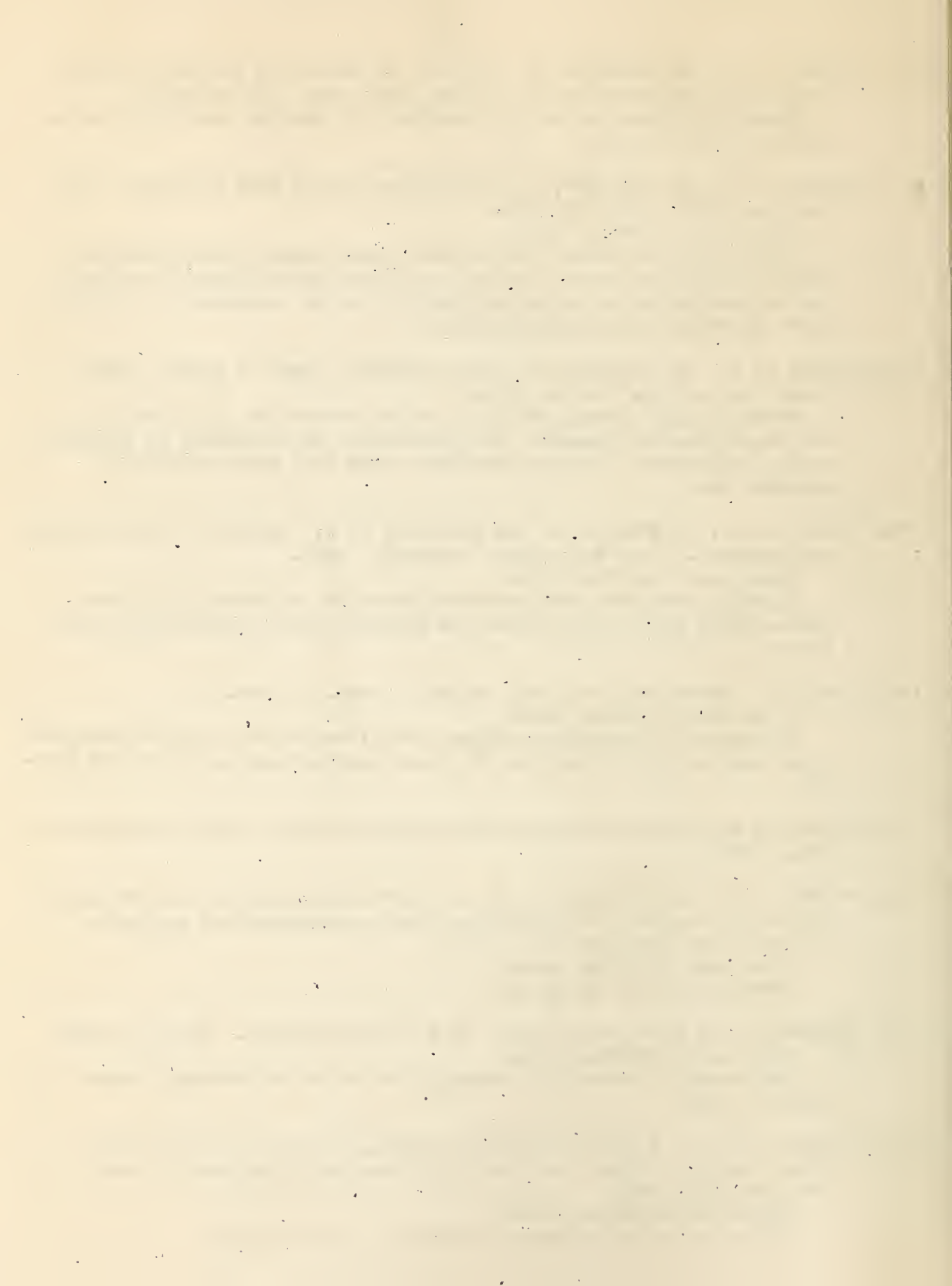
2024

2025

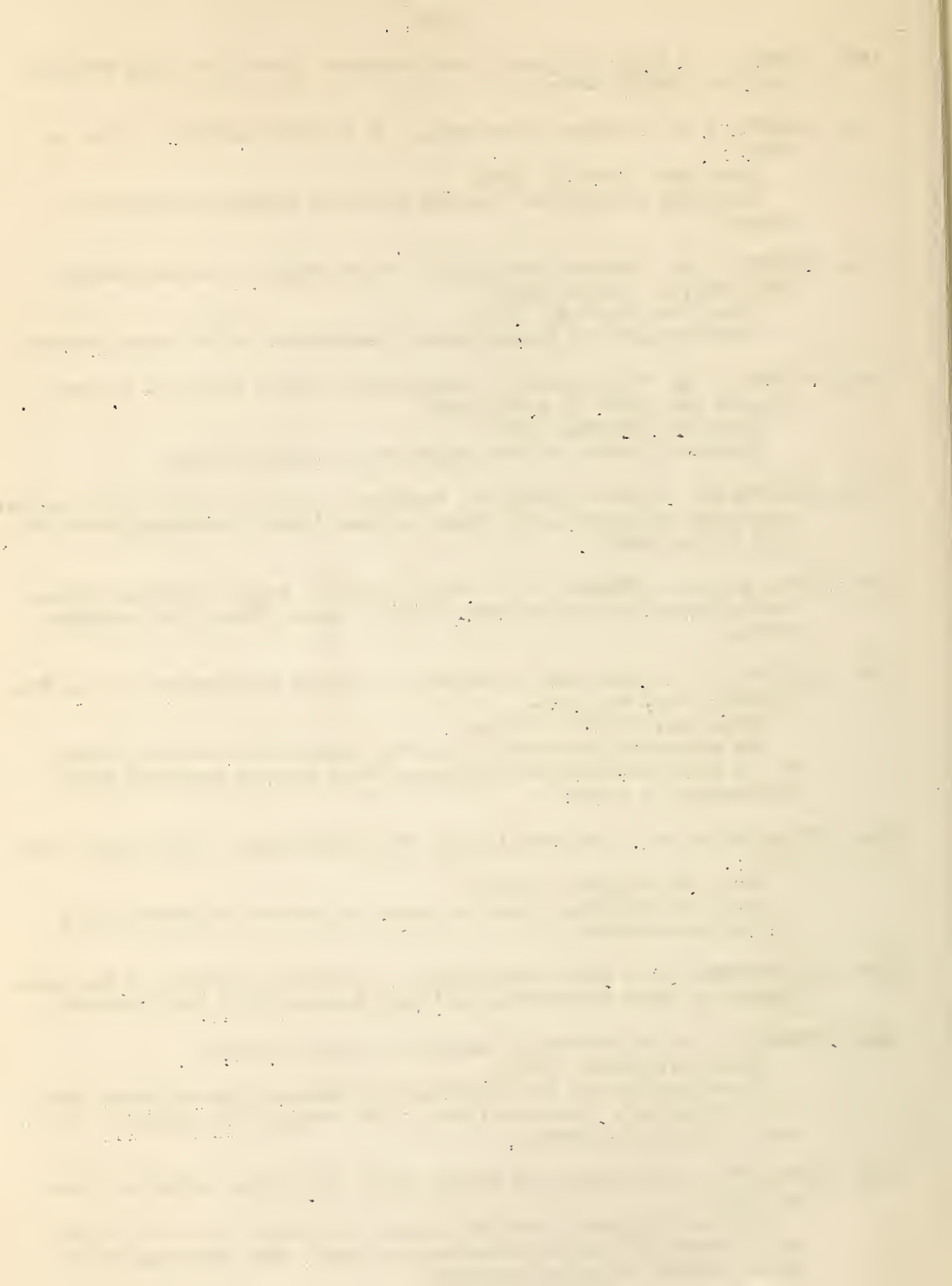
127. MORGAN, R. H. Coloring and flavoring of chocolate centers. Food Manuf. 5:107-8. 1930.
Chem. Abs. 24:2810. 1930.
Some practical points involved in the art of coloring and flavoring applied to chocolate centers are given. Natural and coal tar colors and various flavors are discussed.
128. NULOMOLINE Co., The. Invert sugar for making confections. Ger. Pat. 618,324. Sept. 6, 1935.
Chem. Abs. 30:186. 1936.
Invert sugar for making confections.
129. OLSEN, A. G., and SELTZER, E. Preparation of flavoring materials. U. S. Pat. 2,369,847. Feb. 20, 1945.
Chem. Abs. 39:3093. 1945.
Method described for incorporating volatile flavoring substance with colloids which are then dried for use in foods, confections, etc.
130. O'NEIL, F. Candy tricks and treasures. (Book) O. Donne Publishing Co., Greenfield, Mass.
131. OVERBROOK, W. J. Treatment of candies and the like and the product obtained therefrom. U. S. Pat. 1,327,113. Jan. 6, 1920.
Hydrogenated oil is used for forming a thin coating of high polish on candy. This coating protects candy from injury by moisture.
132. PAINE, H. S. Constructive chemistry in relation to confectionery manufacture. Ind. Eng. Chem. 16:513-17. 1924.
Chem. Abs. 18:1363. 1924.
The chemistry and physics of candy manufacture is described which led to successful use of invertase, together with other subjects.
133. PAINE, H. S. Cane cream, a new food product made from sugar cane. Sugar Bull. 5:No. 4. 1-2. 1926.
Description of product.
134. PAINE, H. S. Research in the confectionery industry. Ind. Eng. Chem. 20:1325-7. 1928.
Chem. Abs. 23:650. 1929.
Discussion of application of chemistry in development of new types of confectionery, storage and packaging.
135. PAINE, H. S., BRICKNER, V., and HAMILTON, J. Means of preventing "explosive" or bursting fermentation of chocolate-coated fondant candy. Ind. Eng. Chem. 19:358-63. 1937.
Chem. Abs. 21:1503. 1927.
Fermentation controlled by inverting part of sucrose with enzyme invertase. The critical solids content is approximately 79%. A problem exists with fruit but fermentation may be controlled by heating the fruit and use of the enzyme.



136. PAINE, H. S., and HAMILTON, J. Process for preparing fondant or chocolate soft cream centers. U. S. Pat. 1,437,816. Dec. 5, 1922.
Describes method for use of invertase to remelted fondant in preparation of soft creams.
137. PAINE, H. S., and HAMILTON, J. Confections coated with fondant. U. S. Pat. 1,502,207. July 22, 1924.
Chem. Abs. 18:2927. 1924.
Confections are formed with a center and fondant coating both of which contain invertase. Invertase is added to the fondant coating and the confection is warmed to 27-50° in moist atmosphere. This prevents spotting from crystallization.
138. PAINE, H. S., and HAMILTON, J. Milk albumen. Conf. J. 51:82. 1925.
Manuf. Conf. 5:No. 11. 15, 1925.
Powdered milk albumen was found to be superior to egg albumen in the manufacture of frappes. The composition of the powder is approximately as follows: protein 42%; milk sugar 39%; milk salts 16%; moisture 3%.
39. PAINE, H. S., WALTON, C. F., and BADOLLET, M. S. Industrial applications of invertase. Ind. Eng. Chem. 17:445-50. 1925.
Chem. Abs. 19:1960. 1925.
Suitable procedure for invertase inversion of sucrose in golden sirup, maple sirup, maple cream and fondant types of confections are given.
140. PALIK, F. Chocolate. Fr. Pat. 831,591. Sept. 8, 1938.
Chem. Abs. 33:1834. 1939.
The taste is improved by adding a small amount of a lipid substance e.g., egg or soybean lecithin to reduce surface tension of the fat present.
141. PEASE, M. A. Bluebook on home candy making. (Book). Pease, Bloomington, Ill., 1923.
142. POUNCY, A. E., and SUMMERS, B. C. L. Micromasurement of relative humidity for the control of osmophilic yeast in confectionery products. J. Soc. Chem. Ind. 58:162-5. 1939.
Chem. Abs. 33:5075. 1939.
Details of tests are given.
143. PRESTON, R. M. Food composition. U. S. Pat. 1,949,657. March 6, 1934.
Chem. Abs. 28:2808. 1934.
Pectin-sugar composition suitable for use in confections, cakes, jellies, etc.
144. PROFFITT, M. J. A flow manostat for various purposes, including the candy (cooking) test. Jr. Res. Natl. Bur. Stds. 29:143-55. 1942.
Res. Paper No. 1492.
Chem. Abs. 36:6050. 1942.
A flow manostat and method of operation is described.

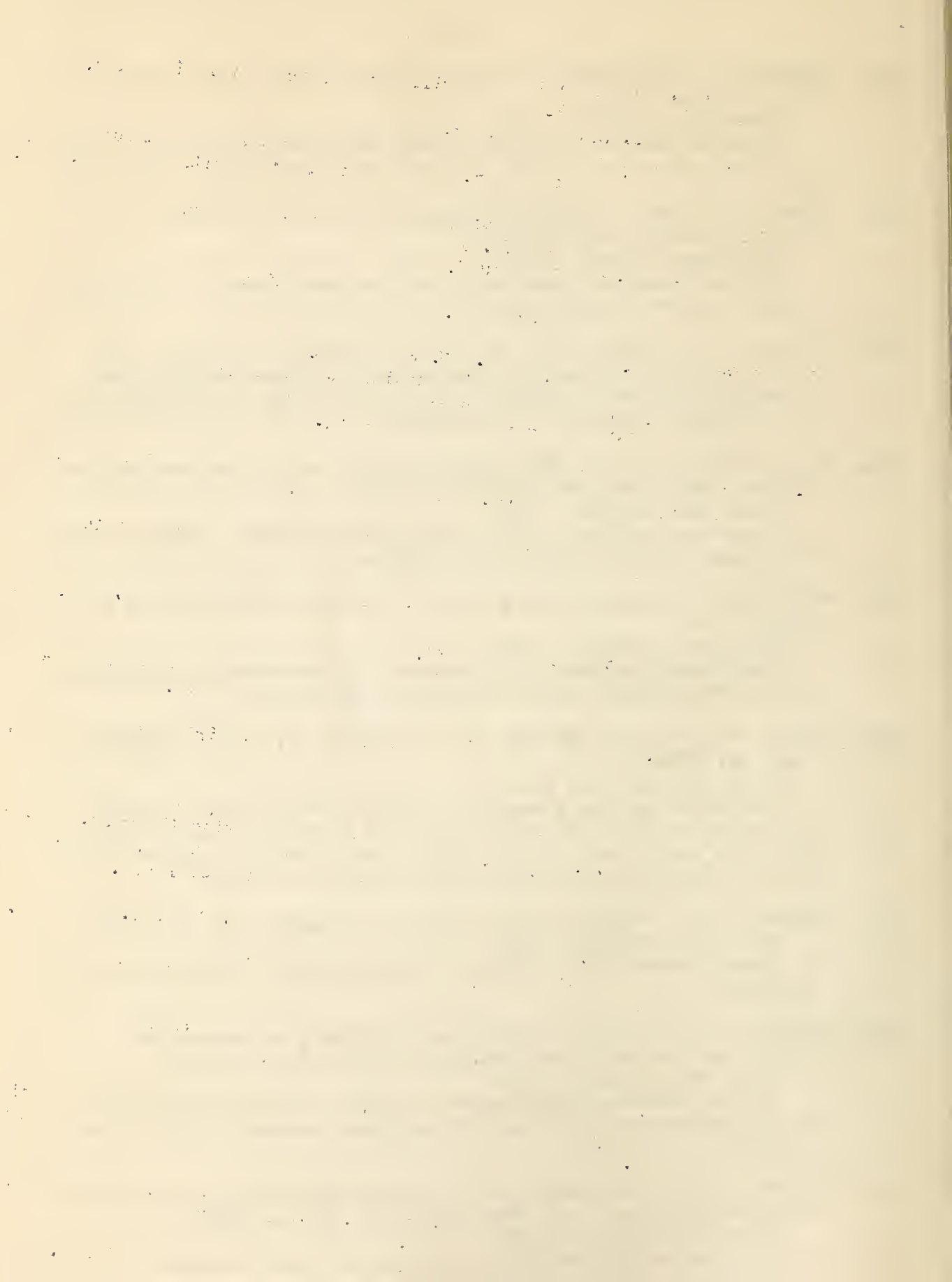


145. RIGBY, W. O. Rigby's reliable candy teacher. (Book) The Rigby Publishing Co., Topoka, Kansas.
146. ROLAND, A. C. Treating candy scrap. U. S. Pat. 2,227,813. Jan. 7, 1941.
Chem. Abs. 35:2630. 1941.
Describes process for treating dissolved candy and recovery of sugar.
147. ROOKER, W. A. New uses for pectin. Fruit Prods. J. and Am. Vinegar Ind. 7:No. 1. 11-13. 1927.
Chem. Abs. 21:3715. 1927.
Uses discussed in (among others) confections and in candy doctors.
148. ROOKER, W. A. Fruit pectin in confections. Fruit Prods. J. and Am. Vinegar Ind. 7:No. 3. 9-11. 1927.
Chem. Abs. 22:286. 1928.
Discusses pectin and its proper use in candy making.
149. ROUSSET, H. Bonbons, pastilles, fondants, caramels, chocolates, nougats, berlongots et sucreries de toutes sortes. (Book) Desforges, Giratdot & Co, Paris, 1926.
150. ROUX, E., and MUTTELET, C. F. Sugar pastries, sugars, honeys, syrups, confectionery, sugar products, licorice sugar. (Book) Ch. Berger, Paris.
151. SARATTI, A. G. Chocolate resistant to elevated temperatures. Ger. Pat. 744,862. Nov. 25, 1942.
Chem. Abs. 39:2828. 1945.
Bar chocolate resistant to elevated temperatures made by adding to the usual constituents substances which promote hardening when the mixture is heated.
152. SCARBOROUGH, N. F. Crystallization of confectionery. Food Tech. 2:1-4. 1932.
Chem. Abs. 27:2736. 1933.
Practical operating hints are given on methods of crystallizing jellies and fondants.
153. SCARBOROUGH, N. F. Sweet manufacture: A practical handbook on the manufacture of sugar confectionery. (Book) Leonard Hill, Ltd., London.
154. SCHENK, C. A new confection. Schweiz. Wochschr. 48:709.
Chem. Abs. 5:928. 1911.
Describes roasting of cashew nuts by natives of Brazil which they call "gorupoppu". Gives analysis. Nuts brought into commerce and used in place of almonds.
155. SCHLUETER, P. H. Process of making candy. U. S. Pat. 1,101,572. June 30, 1914.
Process for making candy by cooking cane sugar with cream of tartar at about 130° under atmospheric pressure; then finishing under vacuum without additional heating.



156. SCHNELLER, M. A. Confectionery. Brit. Pat. 240,452, Sept. 24, 1924.
Grained confection comprised of sugar crystals in a sirupy medium which may contain gelatinous substances to yield soft and less soluble crystals than sucrose.
157. SCHNELLER, M. A. Grained confection and process of making same. U. S. Pat. 1,551,175. Aug. 25, 1925.
Chem. Abs. 20:787. 1926.
Made with dextrose hydrate, invert sugar and sucrose or other sugars of greater solubility than dextrose hydrate.
158. SCHNELLER, M. A. Dosage of substances. U. S. Pat. 1,829,947. Nov. 3, 1931.
Chem. Abs. 26:784. 1932.
Method for dispersing oils, colors, etc., into crystals of crystalline products for use in confectionery, foods and other products.
159. SCHWEIGER, M. F. Sugar product and method of making the same. U. S. Pat. 2,373,919. April 17, 1945.
Chem. Abs. 39:3859. 1945.
Co-crystallization of sucrose and dextrose (4-15% dextrose) gives a product useful as a powdered fondant.
160. SKEATS, C. A. Commercial confectionery (Book) Gresham Pub. Co., Ltd., London.
161. SMOLYANITSKII, M. E., and VELITSINA, N. D. Comparative cooling behavior of caramel products on moving conveyors. Trudy Vsesoyuz. Nauch-Issledovatel. Inst. Konditerskoi Prom. 1941, No. 3, 101-6.
Chem. Abs. 37:6364. 1943.
Optimum conditions for cooling on conveyor are discussed. Under certain conditions the coefficient of heat transfer is a linear function of air supply.
162. SPECK, W. F. Process of manufacturing candy and candy produced thereby. U. S. Pat. 1,025,326. May 7, 1912.
Chem. Abs. 6:1940. 1912.
Confection of flaked corn coated with powdered nuts and sweetened.
163. SRIVASTAVA, R. C., GURURAJA, K. S., and JOSHI, B. C. Sugar candy, crystallization, and crystallizers. Proc. Sugar Tech. Assoc. India 13:1, 57-68. 1944.
Chem. Abs. 39:3854. 1945.
Techniques for producing numerous local types of rock candy are described. Designs for crystallizers are suggested.
164. STANLEY, J. Confection. Can. Pat. 406,919. Aug. 25, 1942.
Chem. Abs. 36:6695. 1942.
To improve and reduce the viscosity fat containing confections brominated soybean phosphatide is dispersed in the compound.

165. STANLEY, J. Soy lecithin use will save scarce fats. Food Ind. 14: No. 7, 69-71. 1942.
Chem. Abs. 36:4923. 1942.
Lecithin extends stability of fats and reduces the amount of egg yolk required in ice cream. It also stabilized vitamin A in foods.
166. STANLEY, J. Method of manufacturing confection and product. U. S. Pat. 2,287,838. June 30, 1942.
Chem. Abs. 37:196. 1943.
Mixture described containing lecithin which serves as viscosity reducing agent in chocolate.
167. STETSON, L. W. Confection. U. S. Pat. 1,700,387. Jan. 29, 1929.
Gluten such as that used in chewing gums is maintained in a substantially plastic and tenacious condition by use of a binder such as hydrogenated peanut oil and glucose.
168. ST. J. GATES, W. R. B. Milk preparation for use in confectionery and baking. Brit. Pat. 350,670, May 5, 1930.
Chem. Abs. 26:5158. 1932.
Confection made from dried milk powder and sugar. Mixture heated in vacuum, colored, flavored and molded.
169. STUCKES, J. Process of making candy. U. S. Pat. 896,596, Aug. 18, 1908.
Chem. Abs. 28:5552. 1934.
Stick candy is formed of a mixture of approximately equal parts of glucose and cane sugar with about 2% of stearin.
170. STUCKY, U. J. G., and STEINER, J. A. Fondant. Brit. Pat. 407,959, Mar. 16, 1934.
Chem. Abs. 28:5552. 1934.
Fondant is made by bringing a mixture of dry dextrose hydrate and water to a boil and then cooling and beating the mass, a grain regarded, e.g., cane - or beet sugar sirup, levulose, glycerol, etc., being added before the grain is highly developed.
171. SUMMERS, R. G. Confectionery. Brit. Pat. 424,508, Feb. 22, 1935.
Chem. Abs. 29:5196. 1935.
Method described for making a confection that contains air on beating.
172. TAYLOR, W. A. Control of acidity and alkalinity in canning and allied industries. Glass Container 7:No. 4, 1640. 1928.
Chem. Abs. 22:1414. 1928.
List of recommended indicators is given together with description of application in candy and many other branches of food manufacture.
173. THOMPSON, D. R., and JOSEPH, G. H. Jelly preparations and method of preparing jellies. U. S. Pat. 2,059,541. Nov. 3, 1936.
Chem. Abs. 31:476. 1937.
Describes method for making confectioners jelly batches.



174. TRACY, P. H. How to make honey-cream. Dairy World. 11:No. 10. 24-7. 1933.
Chem. Abs. 27:3012. 1933.
Describes method.
175. USPENSKII, E. M. Chicory as a sugar plant. Pishchevaya Prom. 1944. No. 5/6 45-6.
Chem. Abs. 40:483. 1946.
Discusses possible use of chicory root as source of fructose for confectionery.
176. VALLIER, R. The manufacture of bombons. Rev. gén. chim. 15. 393. Chem. Abs. 7:1066. 1913.
Description of commercial methods.
177. VAN de MARK, M. S., and WARE, L. M. Candies from sweet potatoes pack health-promoting values. Food Ind. 19:1204-5. 1947.
Describes several methods for making acceptable candies from sweet potatoes.
178. VAN LAER, M. H., and ROSKAM, A. The role of pH in confectionery. Ann. zymol. (2) 1:76-8. 1933.
Chem. abs. 27:3758. 1933.
A discussion of benefits derived by its use.
179. WALSH, J. F., and GOODMAN, H. Nonhygroscopic sugar product. U. S. Pat. 2,231,835. Feb. 11, 1941.
Chem. Abs. 35:3350. 1941.
A mixture containing reducing sugars, maltose and dextrose, suitable for use in candies, bakery products, ice cream mixes, etc.
180. WARE, L. M., and VAN de MARK, M. S. Use of sweet potatoes in candies of high and varied food value. Conf.-Ice Cream World 7:No. 22. 7, 16. 1947.
Sweet potato puree and fully cooked dried flour used to make many kinds of candy.
181. WEBB, B. H. Utilization of whey in foods. Food Res. 3:233-8. 1938.
Chem. abs. 32:5045. 1938.
Edible whey successfully used in candy fillings, soups, whey fruit mixtures and beverages.
182. WEBB, W. A. Food composition. U. S. Pat. 2,283,302. May 19, 1942.
Chem. Abs. 36:6262. 1942.
Gives details of preparation of products suitable for use in cakes, confectionery, ices, etc., from dehydrated apples, raisins, and potatoes with fat or milk solids.
183. WHYMPER, R. Manufacture of confectionery (Revision of original book by JACOUTOT) Van Nostrand, N. Y.

184. WHYMPER, R. Cocoa and chocolate: Their chemistry and manufacture. (Book) Blakiston Co., Phila., Pa.
185. WHYMPER, R. Sugar composition. U. S. Pat. 2,299,287. Oct. 20, 1942.
Chem. Abs. 37:1888. 1943.
Compound consists of small spray particles of invert sugar, each completely enveloped by fine adhering crystal particles of sucrose suitable for making fondant.
186. WIESELAHN, G. A. Soft lecithin preparation. U. S. Pat. 2,194,842. March 26, 1940.
Chem. Abs. 34:5209. 1940.
Method for softening and controlling consistency of phosphatide (lecithin) for use with fats, mineral oil, candy batches, etc.
187. WILLIAMS, A. E. Coconut oil in confectionery-growing utilization in the toffee industry. Chem. Trade Jr. 88:632-3. 1931.
Chem. Abs. 25:4633. 1931.
Chemical and physical properties make it suitable for use in toffee. Believed to hydrolyze starch and dextrans.
188. WILLIAMS, A. E. Starch products in confectionery - their direct use in sweetstuff manufacture. Chem. Trade Jr. 95:273. 1934.
Chem. Abs. 29:1528. 1935.
Discusses hydrolysis of starch by heating; then conversion of dextrin to sugar during manufacture of candy.
189. WILLIAMS, P. Preparation for making food products and method of making the same. U. S. Pat. 2,010,340, Aug. 6, 1935.
Chem. Abs. 29:6324. 1935.
Describes a preparation suitable for making jellied candies and confections from sugar, pectin and sodium phosphate.
190. YACCOBIAN, R. K. Candy and process for making same. U. S. Pat. 921,052, May 11, 1909.
Chem. Abs. 3:2185. 1909.
Sugar is cooked with flavoring materials until it candies, mixed with starch or flour, heated, and pulled or kneaded to make a fibrous mass. Chocolate, cocoa, lemon juice or oil of rose may be added.
191. YANOVSKAYA, B. I. Sugar-bean candies enriched in antiscorbutic concentrates from black-currant juice. Voprosui Pitaniya 5:No. 3, 41-4. 1936.
Chem. Abs. 30:6460. 1936.
In this form the vitamin C activity is well retained over a long time.

